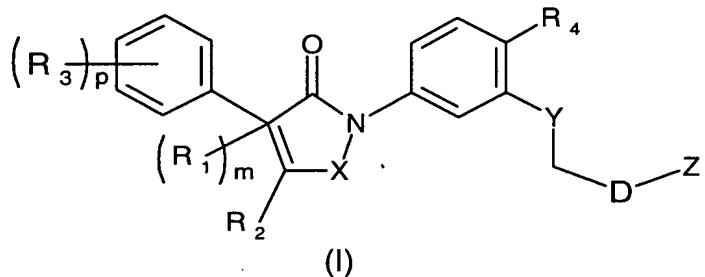


Amendments to the claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

What is claimed [Claims]

1.(Original) A compound of formula (I) or a pharmaceutically acceptable salt



thereof:

wherein:

R<sub>1</sub> is hydrogen, hydroxy, fluoro, chloro, C<sub>1</sub>-6alkyl, C<sub>3</sub>-7cycloalkyl, C<sub>3</sub>-7cycloalkyloxy, C<sub>1</sub>-6alkoxy or haloC<sub>1</sub>-6alkoxy;

m is 0 when  $\equiv$  is a double bond and m is 1 when  $\equiv$  is a single bond;

R<sub>2</sub> is hydrogen, halogen, cyano, nitro, C<sub>1</sub>-6alkyl, C<sub>3</sub>-7cycloalkyl, C<sub>3</sub>-7cycloalkyloxy, haloC<sub>1</sub>-6alkyl, C<sub>1</sub>-6alkoxy, haloC<sub>1</sub>-6alkoxy, C<sub>1</sub>-6alkylthio, amino, mono- or di-C<sub>1</sub>-6alkylamino or an N-linked 4 to 7 membered heterocyclic group;

X is -(CH<sub>2</sub>-CH<sub>2</sub>)-, -(CH=CH)-, -(CH<sub>2</sub>)<sub>3</sub>-, -C(CH<sub>3</sub>)<sub>2</sub>-, -(CH=CH-CH<sub>2</sub>)-, -(CH<sub>2</sub>-CH=CH)- or a group -(CHR<sub>5</sub>)- wherein R<sub>5</sub> is hydrogen, halogen, hydroxy, cyano, nitro, C<sub>1</sub>-6alkyl, C<sub>3</sub>-7cycloalkyl, C<sub>3</sub>-7cycloalkyloxy, haloC<sub>1</sub>-6alkyl, C<sub>1</sub>-6alkoxy, haloC<sub>1</sub>-6alkoxy or C<sub>1</sub>-6alkylthio;

R<sub>3</sub> is halogen, cyano, C<sub>1</sub>-6alkyl, C<sub>3</sub>-7cycloalkyl, C<sub>3</sub>-7cycloalkyloxy, C<sub>1</sub>-6alkoxy, C<sub>1</sub>-6alkylthio, hydroxy, amino, mono- or di-C<sub>1</sub>-6alkylamino, an N-linked 4 to 7 membered heterocyclic group, nitro, haloC<sub>1</sub>-6alkyl, haloC<sub>1</sub>-6alkoxy, aryl, arylC<sub>1</sub>-6alkyl, arylC<sub>1</sub>-6alkyloxy, arylC<sub>1</sub>-6alkylthio or COOR<sub>6</sub>, CONR<sub>7</sub>R<sub>8</sub> or COR<sub>9</sub> wherein R<sub>6</sub>, R<sub>7</sub>, R<sub>8</sub> and R<sub>9</sub> are independently hydrogen or C<sub>1</sub>-6alkyl;

p is 0, 1 or 2 or 3;

R<sub>4</sub> is hydrogen, halogen, hydroxy, cyano, nitro, C<sub>1</sub>-6alkyl, C<sub>1</sub>-6alkanoyl, C<sub>3</sub>-7cycloalkyl, C<sub>3</sub>-7cycloalkyloxy, haloC<sub>1</sub>-6alkyl, C<sub>1</sub>-6alkoxy, haloC<sub>1</sub>-6alkoxy,

C<sub>1</sub>-6alkylthio, amino, mono- or di-C<sub>1</sub>-6alkylamino or an N-linked 4 to 7 membered heterocyclic group;

Y is oxygen, sulfur, -CH<sub>2</sub>- or NR<sub>10</sub> wherein R<sub>10</sub> is hydrogen or C<sub>1</sub>-6alkyl;

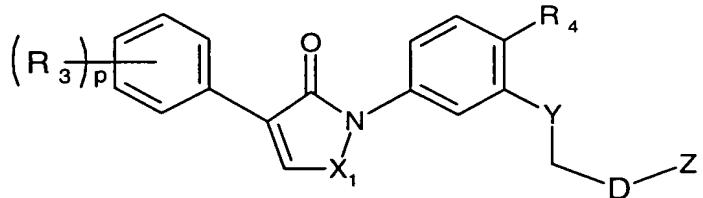
D is a single bond, -CH<sub>2</sub>-, -(CH<sub>2</sub>)<sub>2</sub>- or -CH=CH-; and

Z is an optionally substituted C-linked 4 to 7 membered heterocyclic group containing at least one nitrogen, an optionally substituted N-linked 4 to 7 membered heterocyclic group, or Z is -NR<sub>11</sub>R<sub>12</sub> where R<sub>11</sub> and R<sub>12</sub> are independently hydrogen or C<sub>1</sub>-6alkyl.

2. (Original) A compound as claimed in claim 1, wherein X is -CH<sub>2</sub>-.

3. (Presently Amended) A compound as claimed in claim 1 [or claim 2], wherein when  $\equiv$  is a single bond, R<sub>1</sub> is hydrogen, hydroxy or C<sub>1</sub>-6alkoxy.

4. (Presently Amended) A compound as claimed in claim 1 having the following formula (Ia):



(Ia)

wherein R<sub>3</sub>, p, R<sub>4</sub>, Y, D, Z,  $\equiv$  are as defined in claim 1 and X<sub>1</sub> is -CH<sub>2</sub>- or -HC(OH)-.

5. (Presently Amended) A compound as claimed in [any of claims 1-4] claim 1, wherein p is 1 or 2 and R<sub>3</sub> is/are halogen, particularly chloro or fluoro, attached at the 3 or the 3,4-positions of the phenyl ring.

6. (Presently Amended) A compound as claimed in [any of claims 1-5] claim 1, wherein R<sub>4</sub> is C<sub>1</sub>-6alkoxy (particularly methoxy), OCF<sub>3</sub>, halogen or cyano.

7. (Presently Amended) A compound as claimed in [any of claims 1-6] claim 1 wherein D is -CH<sub>2</sub>-.

8. (Presently Amended) A compound as claimed in [any of claims 1-7] claim 1, wherein Y is oxygen.

9. (Presently Amended) A compound as claimed in [any of claims 1-8] claim 1, wherein Z is an optionally substituted N-linked 4 to 7 membered heterocyclic group.

10. (Presently Amended) A compound as claimed in claim 9, wherein Z is piperidyl.

11. (Presently Amended) A compound as claimed in claim 1 which is:

3-(3,4-Dichloro-phenyl)-3-hydroxy-1-[4-methoxy-3-(2-piperidin-1-yl-ethoxy)-phenyl]-pyrrolidin-2-one;

3-(3,4-Dichloro-phenyl)-3-hydroxy-1-[4-methoxy-3-(2-morpholin-4-yl-ethoxy)-phenyl]-pyrrolidin-2-one;

3-(3,4-Dichloro-phenyl)-1-[4-methoxy-3-(2-piperidin-1-yl-ethoxy)-phenyl]-pyrrolidin-2-one;

1-[4-Chloro-3-(2-piperidin-1-yl-ethoxy)-phenyl]-3-(3,4-dichloro-phenyl)-pyrrolidin-2-one;

1-[4-Chloro-3-(2-piperidin-1-yl-ethoxy)-phenyl]-3-(3,4-dichloro-phenyl)-3-hydroxy-pyrrolidin-2-one;

3-(3,4-Dichloro-phenyl)-1-(4-methoxy-3-[2-(4-methyl-piperidin-1-yl)-ethoxy]-phenyl)-pyrrolidin-2-one;

3-(3,4-Dichloro-phenyl)-1-[4-methoxy-3-(2-piperidin-1-yl-ethoxy)-phenyl]-1,5-dihydro-pyrrol-2-one;

3-(3,4-Dichloro-phenyl)-1-[4-methoxy-3-(2-morpholin-4-yl-ethoxy)-phenyl]-1,5-dihydro-pyrrol-2-one;

1-[4-Chloro-3-(2-piperidin-1-yl-ethoxy)-phenyl]-3-(3,4-dichloro-phenyl)-1,5-dihydro-pyrrol-2-one;

3-(3,4-Dichloro-phenyl)-1-[4-methoxy-3-(2-pyrrolidin-1-yl-ethoxy)-phenyl]-1,5-dihydro-pyrrol-2-one;

3-(3-Fluoro-phenyl)-1-[4-methoxy-3-(2-piperidin-1-yl-ethoxy)-phenyl]-1,5-dihydro-pyrrol-2-one;  
3-(3,4-Dichloro-phenyl)-1-(-3-[2-(4,4-difluoro-piperidin-1-yl)-ethoxy]-4-methoxy-phenyl)-1,5-dihydro-pyrrol-2-one;  
3-(3-Fluoro-phenyl)-5-hydroxy-1-[4-methoxy-3-(2-piperidin-1-yl-ethoxy)-phenyl]-pyrrolidin-2-one;  
1-[4-Chloro-3-(2-piperidin-1-yl-ethoxy)-phenyl]-3-(3,4-dichloro-phenyl)-5-hydroxy-pyrrolidin-2-one;  
3-(3,4-Dichloro-phenyl)-1-(-3-[2-(4,4-difluoro-piperidin-1-yl)-ethoxy]-4-methoxy-phenyl)-5-hydroxy-pyrrolidin-2-one;  
3-(3-Fluoro-phenyl)-1-[4-methoxy-3-(2-piperidin-1-yl-ethoxy)-phenyl]-pyrrolidin-2-one;  
3-(3,4-Dichloro-phenyl)-1-[4-methoxy-3-(2-pyrrolidin-1-yl-ethoxy)-phenyl]-pyrrolidin-2-one;  
3-(3,4-Dichloro-phenyl)-1-[4-methoxy-3-(2-piperidin-1-yl-ethoxy)-phenyl]-3-methyl-pyrrolidin-2-one hydrochloride salt;  
3-(3-Chloro-phenyl)-1-{4-methoxy-3-[2-(4-methyl-piperidin-1-yl)-ethoxy]-phenyl}-1,5-dihydro-pyrrol-2-one hydrochloride salt;  
3-(3,4-Dichloro-phenyl)-1-[4-methoxy-3-(2-piperidin-1-yl-ethoxy)-phenyl]-3,4-dihydro-1H-pyridin-2-one;  
3-(3,4-Dichloro-phenyl)-1-[4-methoxy-3-(2-piperidin-1-yl-ethoxy)-phenyl]-piperidin-2-one;  
3-(3,4-Dichloro-phenyl)-1-(4-methoxy-3-[2-(4-methyl-piperidin-1-yl)-ethoxy]-phenyl)-3,4-dihydro-pyrrol-2-one;  
3-(3,4-Dichloro-phenyl)-1-(4-methoxy-3-[2-(4-methyl-piperidin-1-yl)-ethoxy]-phenyl)-4-methyl-1,5-dihydro-pyrrol-2-one;  
3-(4-Chloro-phenyl)-1-(4-methoxy-3-[2-(4-methyl-piperidin-1-yl)-ethoxy]-phenyl)-3,4-dihydro-pyrrol-2-one;  
3-(4-Chloro-phenyl)-1-(4-methoxy-3-[2-piperidin-1-yl)-ethoxy]-phenyl)-3,4-dihydro-pyrrol-2-one;  
3-(3,4-Dichloro-phenyl)-1-[4-methoxy-3-(piperidin-3-ylmethoxy)-phenyl]-pyrrolidin-one;  
3-(3,4-Dichloro-phenyl)-1-[4-methoxy-3-(1-methyl-piperidin-3-ylmethoxy)-phenyl]-pyrrolidin-one;

*N*-{4-[3-(3,4-dichlorophenyl)-2-oxo-2,5-dihydro-1*H*-pyrrol-1-yl]-2-[2-(1-piperidinyl)ethoxy]phenyl}acetamide;

*N*-{4-[3-(3,4-dichlorophenyl)-2-oxo-pyrrolidin-1-yl]-2-[2-(1-piperidinyl)ethoxy]phenyl}acetamide;

3-(3,4-Dichloro-phenyl)-1-(4-methoxy-3-[2-(4-methyl)-piperidin-1-yl-ethoxy]-phenyl)-3-methyl-pyrrolidin-2-one;

3-(3-Chloro-phenyl)-1-[4-methoxy-3-(2-piperidin-1-yl-ethoxy)-phenyl]-pyrrolidin-2-one;

3-(3-Trifluoromethyl-phenyl)-1-[4-methoxy-3-(2-piperidin-1-yl-ethoxy)-phenyl]-pyrrolidin-2-one;

3-(3-Trifluoromethyl-phenyl)-1-[4-methoxy-3-(2-piperidin-1-yl-ethoxy)-phenyl]-1,5-dihydro-pyrrol-2-one;

3-(3-Chloro-phenyl)-5-methoxy-1-[4-methoxy-3-(2-piperidin-1-yl-ethoxy)-phenyl]-pyrrolidin-2-one;

3-(3-Chloro-phenyl)-1-[4-methoxy-3-(2-piperidin-1-yl-ethoxy)-phenyl]-1,5-dihydro-pyrrol-2-one;

3-(4-Fluoro-phenyl)-1-[4-methoxy-3-(2-piperidin-1-yl-ethoxy)-phenyl]-1,5-dihydro-pyrrol-2-one;

3-(4-Fluoro-phenyl)-1-[4-methoxy-3-(2-piperidin-1-yl-ethoxy)-phenyl]-pyrrolidin-2-one;

1-{4-Methoxy-3-[2-(4-methyl-piperidin-1-yl)-ethoxy]-phenyl}-3-(4-methyl-phenyl)-1,5-dihydro-pyrrol-2-one;

1-{4-Methoxy-3-[2-(piperidin-1-yl)-ethoxy]-phenyl}-3-(4-methyl-phenyl)-1,5-dihydro-pyrrol-2-one;

3-(4-Bromo-phenyl)-1-[4-methoxy-3-[2-(4-methyl-piperidin-1-yl)-ethoxy]-phenyl]-1,5-dihydro-pyrrol-2-one;

1-{4-Methoxy-3-[2-(4-methyl-piperidin-1-yl)-ethoxy]-phenyl}-3-(4-trifluoromethyl-phenyl)-1,5-dihydro-pyrrol-2-one;

3-(2-Chloro-phenyl)-1-[4-methoxy-3-[2-(4-methyl-piperidin-1-yl)-ethoxy]-phenyl]-1,5-dihydro-pyrrol-2-one;

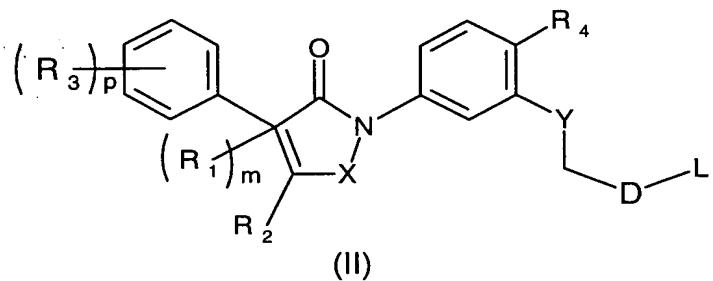
3-(3,4-Dichloro-phenyl)-3-hydroxy-1-[4-methoxy-3-[2-(4-methyl-piperidin-1-yl)-ethoxy]-phenyl]-pyrrolidin-2-one;

3-(3,4-Dichloro-phenyl)-3-fluoro-1-[4-methoxy-3-[2-(4-methyl-piperidin-1-yl)-ethoxy]-phenyl]-pyrrolidin-2-one;

3-(3,4-Dichloro-phenyl)-1-{4-methoxy-3-[(1-methyl-pyrrolidin-2-yl)-methoxy]-phenyl}-pyrrolidin-2-one;  
3-(3,4-Dichloro-phenyl)-1-{4-methoxy-3-[(1-methyl-pyrrolidin-2-yl)-methoxy]-phenyl}-3,4-dihydro-pyrrol-2-one;  
or a pharmaceutically acceptable salt thereof.

12. (Presently Amended) A process for the preparation of a compound as defined in [any of claims 1-11] claim 1, which process comprises:

(a) reacting a compound of formula (II):

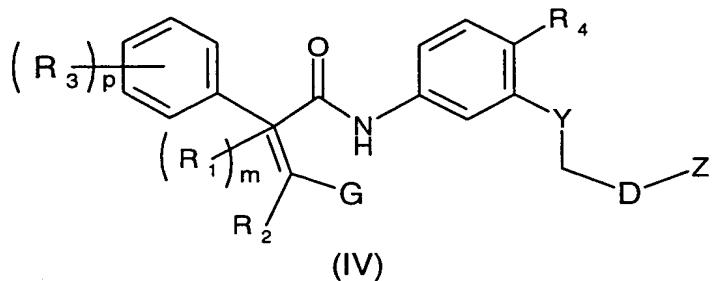


wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, m, p, X, —, Y and D are as defined for formula (I), and L is a leaving group, with a compound of formula (III):



wherein Z is as defined for formula (I); or

(b) cyclising a compound of formula (IV):



wherein R<sub>1</sub>, R<sub>2</sub>, m, R<sub>3</sub>, p, R<sub>4</sub>, Y, D, Z and  $\text{---X=CH}_2$  are as defined for formula (I) and G is a group -X=CH<sub>2</sub>, wherein X is as defined for formula (I), dehydrogenated as required;

optionally followed by:

- removing any protecting groups; and/or
- converting a compound of formula (I) into another compound of formula (I); and/or
- forming a pharmaceutically acceptable salt.

13. (Presently Amended) A pharmaceutical composition comprising a compound as defined in [any of claims 1-14] claim 1 and a pharmaceutically acceptable carrier or excipient.

14. (Presently Amended) A process for preparing a pharmaceutical composition as defined in claim 13, the process comprising mixing a compound as defined in [any of claims 1-14] claim 1 and a pharmaceutically acceptable carrier or excipient.

15. (Presently Amended) A compound as defined in [any of claims 1-11] claim 1 for use as a therapeutic substance.

16. (Presently Amended) A compound as defined in [any of claims 1-11] claim 1 for use in the treatment of a CNS disorder.

17. (Presently Amended) A compound as defined in [any of claims 1-11] claim 1 for use in the treatment of depression or anxiety.

18. (Presently Amended) A method of treatment of a CNS disorder in a mammal including a human, which comprises administering to the sufferer a therapeutically safe and effective amount of a compound as defined in [any of claims 1-11] claim 1.

19. (Presently Amended) A method of treatment of depression and or anxiety in a mammal including a human, which comprises administering to the sufferer a therapeutically safe and effective amount of a compound as defined in [any of claims 1-11] claim 1.

20. (Presently Amended) Use of a compound as defined in [any of claims 1-11] claim 1 in the manufacture of a medicament for use in the treatment of a CNS disorder.

21. (Presently Amended) The use of a compound as defined in [any of claims 1-11] claim 1 in the manufacture of a medicament for use in the treatment of depression or anxiety.